

WHAT IS CLAIMED IS:

SUB 17

1. A thread for use with a child resistant container component having an engaging face and at least one locking lug with an axial height and defining an axial height engagement, said thread comprising a first segment and defining a first face having a first thickness, and a second segment which defines a second face having a second thickness, said thread affixed to the engaging face of said component in a spiral such that said thread defines a pitch being not less than the locking lug axial height engagement multiplied by the number of locking lugs present on said component.
2. The thread of Claim 1 wherein said thread configuration is selected from a single helix, a double helix, a triple helix, a quad helix or a multiple helix.
3. The thread of Claim 1 wherein said child resistant container component having an engaging face is a bottle having a bottle neck and defining an opening section and a shoulder section, said bottle neck including at least one locking lug, fixedly attached near the shoulder section and having an axial height, and said thread positioned on said neck such that said first thread segment is adjacent to said opening section and said second thread segment extends toward said shoulder section.
4. The thread of Claim 3 wherein said second thread segment thickness is greater than said first thread segment thickness.

5. The thread of Claim 4 wherein said first segment thickness is about 0.025 inches and said second segment thickness is about 0.057 inches.

6. The thread of Claim 3 wherein said first thread segment thickness is greater than said second thread segment thickness.

7. The thread of Claim 6 wherein said second segment thickness is about 0.025 inches and said first segment thickness is about 0.057 inches.

8. The thread of Claim 3 wherein said thread circumscribes said neck at a pitch which is greater than the locking lug axial height engagement multiplied by the number of locking lugs present on said neck.

9. The thread of Claim 3 wherein the thread configuration is a double helix and a first strand of said double helix starts near said neck opening at a first point and a second strand starts near said neck opening at a point opposite said first strand, and the strands circumscribe said necks so as to form parallel spirals.

10. The thread of Claim 3 wherein said bottle neck has two locking lugs, said lugs being diametrically opposed and having essentially the same axial heights, and wherein said thread defines a pitch greater than two times the axial heights of said lugs.

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11. The thread of Claim 10 wherein said locking lug has a height engagement of about 0.123 inches and said thread has a pitch of about 0.250 inches.

12. The thread of Claim 1 wherein said child resistant container component having an
engaging face is a closure having a closure skirt defining a top section and a bottom section,
said closure skirt including at least one locking lug, fixedly attached near the bottom section
and having an axial height, and said thread positioned on said skirt such that said first thread
segment is adjacent to said top section and said second thread segment extends toward said
bottom section.

13. The thread of Claim 12 wherein said second thread segment thickness is greater than
said first thread segment thickness.

14. The thread of Claim 12 wherein said first thread segment thickness is greater than
said second thread segment thickness.

15. The thread of Claim 12 wherein said thread circumscribes said skirt at a pitch which
is greater than the locking lug axial height engagement multiplied by the number of locking
lugs present on said skirt.

16. The thread of Claim 12 wherein the thread configuration is a double helix and a first
strand of said double helix starts near said skirt bottom at a first point and a second strand

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starts near said skirt bottom at a point opposite said first strand, and the strands circumscribe said skirt so as to form parallel spirals.

17. The thread of Claim 12 wherein said closure skirt has two locking lugs, said lugs being diametrically opposed and having essentially the same axial heights, and wherein said thread defines a pitch greater than two times the axial heights of said lugs.

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18. A child resistant closure and bottle combination comprising:

a. a first child resistant container component having at least one locking lug with an axial height and defining an axial height engagement, and having a thread with a first segment defining a first face having a first thickness and with a second segment defining a second face having a second thickness, and said locking lug and said thread being positioned on an engaging face of said first component and defining a pitch being not less than the locking lug axial height engagement multiplied by the number of locking lugs present on said first component; and

b. a second child resistant container component having at least one locking lug defining an axial height and being adapted to matingly engage said first component locking lug, and having a thread adapted to matingly engage said first component thread such that the axial displacement of said second component thread plus said first component thread when combined with the pitch is greater than the first component locking lug height, said locking lug and said thread being positioned on an engaging face of said second component.

19. The thread of Claim 18 wherein said first component second thread segment thickness is greater than said first component first thread segment thickness.

20. The thread of Claim 3 wherein said first component first thread segment thickness is greater than said first component second thread segment thickness.

21. The child resistant closure and bottle combination of Claim 18 wherein said first child resistant closure component is a bottle and said first engaging face is a bottle neck defining an opening section and a shoulder section, and said at least one locking lug being fixedly attached near the shoulder section, and said thread positioned on said neck such that said first thread segment is adjacent to said opening section and said second thread segment extends toward said shoulder section; and wherein said second child resistant closure component is a closure and said engaging face is a closure skirt defining a top section and a bottom section, and said at least one locking lug being fixedly attached near the bottom section, and said thread extending from said top section toward said bottom section.

22. The child resistant closure and bottle combination of Claim 18 wherein said first child resistant closure component is a closure and said first engaging face is a closure skirt defining a top section and a bottom section, and said at least one locking lug being fixedly attached near the bottom section, and said thread positioned on said skirt such that said first thread segment is adjacent to said top section and said second thread segment extends toward said bottom section; and wherein said second child resistant closure component is a bottle and said engaging face is a bottle neck defining an opening section and a shoulder section,

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and said at least one locking lug being fixedly attached near the shoulder section, and said thread extending from said opening section toward said shoulder section.

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23.

A child resistant closure and bottle combination comprising:

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a. a first child resistant container component having at least one locking lug with an axial height and defining an axial height engagement, and having a thread with a first segment defining a first face having a first thickness and with a second segment defining a second face having a second thickness, said second segment being contiguous with said first segment, and said locking lug and said thread being positioned on an engaging face of said first component and defining a pitch being not less than the locking lug axial height engagement multiplied by the number of locking lugs present on said first component; and

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b. a second child resistant container component having at least one locking lug defining an axial height and being adapted to matingly engage said first component locking lug, and having a thread adapted to matingly engage said first component thread such that the axial displacement of said second component thread plus said first component thread when combined with the pitch is greater than the first component locking lug height, said locking lug and said thread being positioned on an engaging face of said second component.

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